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Mobilizing risk: explaining policy transfer in food and occupational safety regulation in the UK

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Abstract. Using comparative methods of policy analysis, this paper explores the institutional factors shaping the transfer and adaptation of risk-based approaches to regulation within and between the regimes for occupational health and safety (OHS) and food safety in the UK. Over the past two decades successive governments have enthusiastically promoted risk as a key concept for regulatory reform and 'better regulation'. Rather than trying to prevent all possible harms, 'risk-based' approaches promise to make regulation more proportionate and effective by using various risk-based metrics and policy instruments to focus regulatory standard-setting and enforcement activity on the highest priority risks, as determined through formal assessments of their probability and consequences. But despite facing similar external pressures and sharing many historical and structural features as OHS, food safety regulation has proven much less receptive to risk-based reforms of its organizing principles and practices. To explain that anomaly, we consider a range of explanations highlighted in the policy transfer and mobilities literatures. We find that coercive drivers for the adoption of risk, in the form of top-down political pressure for deregulation or hard EU mandates, are much less influential than voluntary ones, which reflect both normative (ie, shared commitments to proportionality, resource prioritization, and blame deflection) and mimetic (ie, imitation of private sector corporate governance models) isomorphism. We conclude with wider reflections about the significance of our cases for policy transfer and mobilities research and for the limits to risk as a universal principle for organizing, and accounting for, governance activity.

Keywords: risk governance, policy mobilities, food safety, occupational health and safety, risk-based regulation

1 Introduction

This paper explores the institutional geographies shaping the development, transfer, and adaptation of what has become known as 'risk-based' regulation. Rather than trying to prevent all possible harms, risk-based approaches seek only to limit those that exceed acceptable levels of risk, as determined through formal assessments of their probability and consequences (OECD, 2010). To that end, risk-based principles and policy instruments can be used to focus not just the goals of regulation, but also related inspection and enforcement practices, on the highest priority risks.

Over the last two decades, successive UK governments have enthusiastically promoted risk as a key concept for regulatory reform and 'better regulation' (BRC, 2006; Cabinet Office, 2002). One of the Blair government's signature acts was to reorganize banking regulation on explicitly risk-based principles, while the Treasury-sponsored Hampton (2005)

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Review of Administrative Burdens on Business led the subsequent Brown government to make it a statutory requirement for all regulatory reporting, inspection, and enforcement activity across all policy domains be prioritized according to risk (BERR, 2007). Announcing these reforms, Gordon Brown explained how the discriminating logic of risk would radically reform the practice of, and even the need for, regulation by

“moving away from the old blanket approach, of 100% form-filling and 100% inspection that is inefficient and wasteful of your time, to a new approach based on risk And I believe, too, we should consider how we can continue to extend our risk-based approach, applying the concept of risk not just to the enforcement of regulation, but also to the design and indeed to the decision as to whether to regulate at all” (Brown, 2006).

The current Coalition government is also committed—rhetorically at least—to risk-based regulation. Its *Programme for Government* pledged to reform occupational health and safety (OHS), so as to “end the culture of ‘tick-box’ regulation, and instead target inspections on high-risk organisations”, and, in the food domain, to reduce “the regulatory burden on farmers by moving to a risk-based system of regulation” (HM Government, 2010, pages 9, 17).

In this paper we examine the cases of food safety and OHS regulation because they have been the key testing grounds for developing risk-based regulation in the UK. Hampton (2005) singled out their risk-based approaches to regulatory inspection and enforcement as exemplars of best practice, which were subsequently generalized to all regulators through the statutory *Regulators’ Compliance Code* (BERR, 2007). The goals of these two regimes, however, remain strikingly different. Since the 1970s the goal of OHS regulation has been to strike an acceptable balance between the risks of workplace injury and the costs, time, and effort required to reduce them further. Workplace accidents, even deaths, are legally acceptable as long as reasonable measures to manage health and safety risks are taken. By contrast, food safety regulation has resisted such a risk-based goal. For almost 150 years businesses have faced an absolute legal duty to ensure that the food they sell is ‘not injurious to health’.

This contrast is puzzling because, as we explain in the paper, these two regulatory regimes face common pressures that might lead us to expect them to mobilize risk-based policy instruments in similar ways. Through both statutory duties and concerted political pressure, central government has required regulators in both domains to demonstrate their risk-based credentials. Both regimes regulate large sectors of the economy and powerful private interests might also be expected to lobby for risk-based approaches as a way of reducing their regulatory burdens (Dodds, 2006). The vast scope of the food safety and OHS domains also challenges regulatory oversight and makes risk-based approaches attractive to regulators to help them rationalize and allocate their scarce resources.

In addition to these common pressures, the two regimes also share an intertwined institutional history that might be expected to facilitate transfers of risk-based regulatory reforms between them. The word and concepts of ‘risk’ have long been associated with OHS and food safety; both regimes having emerged out of Victorian responses to market failures to prevent significant illnesses, injuries, and deaths. Moreover, the regimes for regulating these domains share personnel, and this has encouraged the transfer of organizational models and enforcement principles between them.

The aim of this paper is to explain why food safety regulation has proved less receptive to transfers of risk-based principles and policy instruments than OHS. In so doing, we also address academic debates within political science, sociology, and geography about the factors shaping exchanges of ideas, instruments, and administrative arrangements between policy domains and jurisdictions. After reviewing that literature, we describe the extent to which the regulatory goals and enforcement practices of UK OHS and food safety regulation have become risk based. We then use those contrasting patterns to test different explanatory theories

of policy change circulating in the policy transfer and mobilities literatures, focusing on: path dependencies and policy windows; power of organized interest groups; Europeanization; and bureaucratic proclivities. We conclude with broader reflections on the policy transfer and mobilities literatures and on the institutional drivers of risk-based regulation.

2 Policy transfers, convergence and mobilities

Recent years have seen renewed academic interest in the processes by which policy ideas, instruments, and institutional arrangements from one jurisdiction are reproduced, reworked, or rejected in others (Benson and Jordan, 2011; McCann and Ward, 2013; Peck, 2011). Within political science much of the early work charted spatial and temporal patterns in the diffusion of policy innovations among US states and cities (Walker, 1969). Subsequent work on when, how, and why policy makers draw lessons from policy making elsewhere (eg, Rose, 1993) was informed by many of the same normative ideals of rational, utility-maximizing policy upheld by advocates of risk-based regulation (eg, Breyer, 1993). That research, however, was criticized for ignoring the role of historical path dependencies (de Jong, 2009) and coercive pressures in limiting the scope for rational policy optimization (Dolowitz and Marsh, 1996).

In contrast to the avowed positivism of the lesson-learning approach, Dolowitz and Marsh (1996; 2000) subsumed policy diffusion and lesson drawing within a broader frame of so-called ‘policy transfer’, which acknowledged that policy framings are socially constructed and contestable. They identified a number of analytical variables to classify and explain the success or failure of policy transfer processes, such as the drivers (ie, voluntary versus coercive) and actors involved, the things being transferred, the sources being drawn upon, and the degree to which policies are replicated in different contexts. Empirically, policy transfer research has tended to concentrate on “peer-to-peer transfer between national governments” (Benson and Jordan, 2011, page 373), with a major focus on the agents of policy diffusion such as think tanks and private sector consultants (Stone, 2000). Another concern has been the role of international governance structures, such as the World Trade Organization (WTO) (Gruszczynski, 2010), in promoting or mandating the adoption of policy measures developed elsewhere. Recent research on Europeanization has gone beyond Dolowitz and Marsh’s simple opposition of voluntary and coercive mechanisms by focusing on the dynamics of ‘downloading’ EU requirements into national law and ‘uploading’ by different actors seeking to shape EU requirements in the image of existing national arrangements (Connolly, 2008).

In contrast to this work on the processes of exogenously transferring policies from one context to another, organizational sociologists look to institutional ‘fit’ to explain the endogenous tendency for institutions to adopt similar forms and practices over time. DiMaggio and Powell’s (1983) influential model distinguished between normative, coercive, and mimetic drivers of institutional isomorphism. In the case of risk-based regulation, normative drivers might include beliefs that risk-based approaches improve the transparency, effectiveness, and economic efficiency of regulatory activity (Cabinet Office, 2002; OECD, 2010). Coercive drivers for the adoption of risk might include the statutory UK *Regulator’s Compliance Code* (BERR, 2007) or EU and WTO requirements for risk assessment, as well as soft power drivers, such as business lobbying and neoliberal pressures to lighten regulatory burdens. Finally, mimetic drivers might encompass how public sector organizations ape corporate governance fashions by reframing the inevitable and increasingly auditable challenges of organizational life as ‘risks’ that they should not be blamed for failing to prevent (Huber and Rothstein, 2013).

In a somewhat stylized distinction from those research traditions, geographers have begun exploring what they call ‘policy mobilities’ (eg, McCann, 2011; Peck, 2011), which they distinguish from policy transfer in three ways. First, echoing a wider mobilities literature in sociology and geography (Sheller and Urry, 2006), geographers emphasize “the social and

spatial complexity of movements of all sorts”, in contrast to policy transfer’s focus on the diffusion of stable policy-packages between fixed jurisdictional levels of nationally bounded states according to the optimizing calculations of individual policy makers (McCann and Ward, 2013, page 7). Second, the policy mobilities approach focuses on the scalar and spatial relations through which policy arrangements are put into motion and remade as a result. Third, in contrast to the “implicit literalness” of policy transfer research, “which tends to suggest the importation of fully formed, off-the-shelf policies” (Peck and Theodore, 2001, page 449), geographers also emphasize the mutability of policy ideas and instruments on the move.

From this perspective, policies are regarded as “assemblages of parts of the near and far, of fixed and mobile pieces of expertise, regulation, institutional capacities, etc. that are brought together in particular ways and for particular interests and purposes” (McCann and Ward, 2012, page 328). Some of these claims, particularly about the messiness of policy transfer (de Jong, 2009) and the need to “problematize the division between the domestic and the international” (Stone, 1999, page 53), have also been made within the policy transfer literature. In that sense, the distinctions sometimes drawn between ‘policy transfer’ and ‘policy mobilities’ represent disciplinary boundary-work as much as substantive disputes about the nature of the policy processes being studied.

Perhaps the most important contrast is methodological orientation. Disciplinary traditions in political science tend to emphasize building explanatory models. Indeed, Dolowitz and Marsh’s policy transfer model has been criticized for being insufficiently explanatory because it “does not adequately separate the policy ‘success’ or ‘failure’ being explained from the processes of ‘policy transfer’” being invoked to explain them (James and Lodge, 2003, page 190). By contrast, advocates of the policy mobilities approach are sceptical of models, because they often get “reified, becoming the *objects* of debate rather than *facilitating* analyses of the social processes that constitute policy transfer” (McCann, 2011, page 111). Their preferred “methodological approach is largely qualitative and ethnographic”, typically involving “deep studies” of individual cases (McCann and Ward, 2013, page 10). Yet without careful attention to what such cases are cases *of*, even the ‘distended’ case-study methods recommended for tracing policy mobilities “through globalizing networks and across translocal settings” (Peck and Theodore, 2012, page 21), will struggle to generalize beyond the rather unsatisfying conclusion that “context matters” (Peck, 2011, page 775). Clearly context does matter, but understanding how and why it matters requires some kind of explanatory framework “to identify whether the commonalities between cases are sufficiently strong to warrant seeing them as variations on a theme” (Castree, 2005, page 543).

In response to that challenge we use a comparative case-study methodology focused on regulatory regimes, by which we mean the institutional geographies, rules, practices, and animating ideas that are associated with the regulation of particular problems (Hood et al, 2001). That mesolevel analysis is pitched between macrolevel social theoretic explanations of policy change that, for example, emphasize the global forces of neoliberalism, and microlevel descriptions of particular policy settings. By comparing the evolution of two regulatory regimes in a single country, we can exclude variables that have been identified as important in shaping the international proliferation of risk-based regulation, such as legal culture, national policy style, and political system (Rothstein et al, 2013). In so doing, we can explore the relative importance of various nationally specific factors influencing the transfer and adaptation of risk-based approaches within and between different policy domains in a single polity.

3 Mapping the OHS and food safety regimes

We now compare the regimes for OHS and food safety regulation, focusing on interrelated but distinct aspects of regulatory practice that can each be subject to risk-based reforms. First, we examine the extent to which the principles underlying regulatory goal-setting have been defined in terms of risk, such as regulating chemicals based on acceptable probabilities of contracting cancer, rather than seeking to eliminate all carcinogens. Second, we look at the extent to which regulatory inspection and enforcement involve risk-based practices, such as targeting enforcement activity on the riskiest premises according to the likelihood and consequence of their noncompliance.

Our analysis draws on policy document analysis, supplemented by a well-developed academic literature on the two domains (Hawkins, 2002; Howard, 2004; Hutter, 2011; Rothstein, 2013; Tombs and Whyte, 2010; 2013; Walters et al, 2011). One author (Howard) is also a chartered environmental health practitioner with more than twenty-five years professional experience of food safety and OHS regulation. Moreover, we draw on some twenty interviews with OHS and food safety regulators.

3.1 OHS

OHS regulation in the UK dates back to the mid-19th century. Under the common law, employers were not liable for workplace accidents, on the presumption that the potential for harm was reflected in the wage negotiated by the worker. However, worker protest led to the Factory Acts, which progressively introduced safety rules for various industries, created a very small factory inspectorate, and established an employers' duty of care to employees (Hennock, 2007).

Over the next century OHS regulation grew incrementally through the ad hoc accretion of sector-specific statutes containing detailed rules that addressed an ever-accumulating list of workplace hazards. By the 1960s, however, there was growing dissatisfaction with this piecemeal approach. Critics complained that "the sheer mass of this law, far from advancing the cause of safety and health" led to inflexible safety 'standards' and inconsistent levels of protection (Robens, 1972, paragraph 28). For example, powered woodworking saws required multiple guards, even if they were museum exhibits operated in fenced-off areas, while inspectors could not go beyond regulatory requirements to demand the total containment of mechanically fed factory sawing machines, even if this significantly increased safety for only a small cost. This rules-based approach also left millions of workers unprotected in sectors that were still unregulated, where there were regulatory gaps, or where technological development had outpaced regulatory requirements (eg, Robens, 1972, paragraph 458).

In the face of such problems, a landmark review of OHS regulation by the chair of the National Coal Board, Lord Robens (1972) led to the Health and Safety at Work etc. Act 1974 (HSWA 1974), which fundamentally transformed the institutional structure and legal principles for OHS regulation. The act consolidated the various specialist inspectorates within a new powerful regulatory agency, the Health and Safety Executive (HSE), overseen by a commission organized along corporatist lines with tripartite representation from government, business, and unions. The act also transformed the legal landscape, replacing the patchwork of prescriptive rules with a 'principles-based' approach that required employers to ensure only *so far as is reasonably practicable* ('SFAIRP') the health and safety of their employees. The term *reasonably practicable* was already established in mining case law, as meaning the cost and effort required to reduce risk should not be 'grossly disproportionate' to the benefit gained [*Edwards v. National Coal Board (NCB)*, [1949] 1 All ER 743]. In that case, a miner was killed by a collapsing mine roadway, but the Court of Appeal ruled that it would have been unreasonably expensive for the NCB to shore up all roadways. The act generalized this principle of balancing risk, cost, and benefit to all workplaces and gave it force by creating

a criminal offence of exposing workers to an unreasonable level of risk from *any* hazard, whether or not anyone was actually harmed. By requiring employers to consider both the likelihood and the consequences of workplace harms, SFAIRP established, in principle, if not yet in name, a *risk-based* approach to regulatory goal-setting.

This risk-based calculus was made more explicit by the HSE (1988) when it elaborated its Tolerability of Risk framework to explain to the Public Inquiry into the Sizewell B Nuclear Power Station how it made trade-offs between risk, cost, and benefit. Since then, the risk-based principles underpinning OHS regulation have proved remarkably resilient, despite crises such as the Piper Alpha disaster that killed 167 oil workers, and an EU Framework Directive (89/391/EEC) which implied that workplace hazards should be eliminated regardless of cost. Indeed, the HSE (2013) has been heavily involved in central government initiatives since the 1990s to transfer risk-based regulatory approaches to other policy domains in the UK.

Regulatory inspection to enforce risk-based OHS goals requires considerable expertise. Rather than simply measuring performance against prescriptive rules, inspectors must be able to judge the adequacy of employers' risk assessments of what is reasonably practicable. These duties are shared by expert inspectors, often with advanced degrees, employed by the HSE and local authorities (LAs), with the former inspecting industrial and public sector premises, and the latter inspecting other commercial and service-sector premises (Walters et al, 2011). At the instigation of Robens (1972, paragraph 218), both use a sophisticated risk-based priority-planning system to make routine inspection frequency dependent on scores for the likelihood and consequences of noncompliance (Walters et al, 2011).

Risk also guides the response to violations. In calling for enforcement sanctions to be "proportionate" and reflect "the risks to people arising from the breach" HSE (2009, page 4), guidance now formalizes the long-standing practice of inspectors taking account of likelihood and consequence of noncompliance in deciding upon enforcement action (Hawkins, 2002), which can range from offering advice to criminal prosecution. In principle, the HSWA 1974 requires the courts to decide culpability based on the *ex ante* principle of SFAIRP, although there is some evidence that in practice the courts are more likely to find defendants culpable and to assign larger penalties when harm has actually occurred (Barber, 2002).

3.2 Food safety

As with OHS, the language of risk is now ubiquitous in food policy debates. Risk assessment requirements have been institutionalized in international regulatory regimes, such as that of the EU and WTO (Gruszczynski, 2010). Indeed, the UK Food Standards Agency (FSA) explicitly advocates the application of risk-based approaches to regulation, stating, "We aim always to be risk-based and proportionate We recognise there is no such thing as zero risk, and aim to reduce risk to the level that would be acceptable to the ordinary consumer" (FSA, 2006, paragraph 2.35).

Despite this commitment, however, the extent to which the goal of food safety regulation can be risk-based is constrained by the long-standing legal principle that food cannot be sold that is "injurious to health" or otherwise "unfit for human consumption" [Food Safety Act 1990, (s)8.2]. In this context, the FSA (2011, page 6) describes itself as "the national authority responsible for ensuring your *food is safe to eat*" (emphasis added). To that end, the purpose of risk assessment is not to specify acceptable levels of risk, but to identify any potential health hazards to humans that could make food unsafe. There is no equivalent in food law to the SFAIRP qualification of safety in OHS. Instead there is strict liability for selling unsafe food; defendants must prove either that offences were "due to fault of another person" or that they "carried out all such checks of the food in question as were reasonable in all the circumstances" to ensure that all food they sell is safe [Food Safety Act 1990, (s)20,21.3]. Unlike SFAIRP, the reasonableness criteria demanded by such due diligence do

not balance the costs of added safety checks against the benefits of making food safer. Food safety duties are absolute.

The origin of this distinctive approach dates back to the 19th century, when popular outrage over food adulteration, such as the thinning of flour with white lead, led to the introduction of basic food legislation. The requirement to ensure that food for sale is not ‘injurious to health’ first appeared in the Adulteration of Food and Drugs Act 1872, was repeated in all subsequent UK legislation right up to the current Food Safety Act 1990, and has been reinforced by EU mandates that “food shall not be placed on the market if it is unsafe” [Regulation (EC) 178/2002, section 14]. EU law demands not just clean premises and appropriate food handling and storage, but also the use of the Hazard Analysis and Critical Control Points (HACCP) food management system to address each potential hazard critical to food safety (Directive 93/43/EEC). While some commentators describe HACCP as a risk-based system (Hutter, 2011), its purpose is to eliminate hazards “in order to guarantee safety” (European Commission, 2009); it does not prioritize control measures based on the likelihood and consequence of exposure to hazards or balance the risks, costs, and benefits of control measures. Indeed, the safety focus of HACCP is best illustrated by its original development by NASA to ensure that astronauts were not poisoned by the ready-meals they took into space.

This continuity in the basic legal principles of food safety regulation is remarkable considering the very substantial changes in its institutional architecture. Throughout the 20th century, food safety policy-making responsibilities were shared between the Ministry of Agriculture, Fisheries and Food (MAFF) and the Department of Health. In the 1990s, however, a series of food scandals, most notably BSE, mired MAFF in crisis. In 2000 the Blair government abolished MAFF and, following the recommendation of the James (1997) Report, established the FSA as an independent nonministerial government department to take sole responsibility for food safety policy. Moreover, in recent decades the EU has steadily expanded its writ over food safety through numerous Directives and Regulations and, in 2002, creating the European Food Safety Authority (EFSA) with EU-wide responsibilities for risk assessment and communication.

Although the James Report recommended that the FSA should be modelled on the HSE, the FSA differs in three principal ways. First, unlike the HSE, the FSA’s creation was not accompanied by any change in the goals of food safety law. Second, the FSA was not founded as a powerful corporatist agency overseen by board members sitting as representatives of particular groups, but was founded as a weaker public body governed by a board of publicly appointed individuals selected to provide “a variety of skills and experience ... in matters related to food safety or interests of consumers” [Food Standards Act 1999, (s)2.2]. Third, other than the inspection of slaughterhouses and slaughtered animals, the FSA has been given only limited powers over food safety inspection and enforcement; regulatory functions which have historically rested with LA environmental health departments alongside their OHS inspection and enforcement duties.

While the formal goal of food safety regulation is ensuring safety rather than acceptable risk, regulatory inspection and enforcement have become more risk-based. Starting in the late 1980s, LAs began adapting the OHS priority-planning system to organize inspections for the hundreds of thousands of food premises under their jurisdiction. That approach was reinforced by European Regulation 882/2004, which requires official controls, such as inspection, to be “carried out regularly, on a risk basis” (article 3). In responding to violations, inspectors have traditionally exercised discretion by varying sanctions according to their judgments of the likelihood and consequences of noncompliance, with closure notices and criminal prosecutions reserved for the most serious violations (Howard, 2004). That approach has been formalized by FSA (2012a) guidance and Crown Prosecution Service requirements to

consider the “seriousness of the offence ... and the harm to the victim” in deciding whether to proceed to court (CPS, 2013, page 8).

While the FSA (2012a, page 4) has formally endorsed a “risk-based and proportionate” approach to inspection and enforcement, its own meat hygiene inspections remain largely hazard-based. Rather than varying the degree of scrutiny according to the probability and consequences of harm to human health, every single carcass is inspected by a meat hygiene inspector under the supervision of a certified veterinarian, following a detailed, half-century old, protocol to detect a range of animal diseases, many of which are now rare or of little human health significance (FSA, 2009). EFSA (2013), with FSA support, has advocated a more risk-based approach to meat hygiene, but, while rules have been agreed on pigs [Regulation (EU) 219/2014], agreement has yet to be reached on other animals.

4 Accounting for risk in OHS and food safety regulation

As we have shown, the OHS and food safety regulatory regimes have faced common pressures to adopt risk-based approaches. Yet, despite sharing a number of features that might be receptive to such transfers, food safety regulation has proved more resistant to risk-based reforms than OHS (see table 1). Most notably, while the risk-based legal goal of SFAIRP was established in OHS in the mid-1970s, when there was little precedent or political pressure for such approaches, food safety regulation is still premised on ensuring safe food, despite being reformed a quarter of a century later when risk-based approaches to regulatory reform were in vogue and there was stronger normative and coercive pressure to adopt risk as an organizing principle for regulatory goal-setting.

Table 1. Principles and practices of occupational health and safety (OHS) and food safety regulation in the UK.

OHS	Food
Regulatory goals <i>Risk-based:</i> SFAIRP (so far as is reasonably practicable)	<i>Safety:</i> ‘not injurious to health’
Regulatory inspection <i>Risk-based:</i> Health and Safety Executive and local authority inspections priority-planned by probability and consequence of noncompliance, with enforcement sanctions used in proportion to risk.	<i>Partly risk-based:</i> LA inspections priority-planned, but meat inspection follows strict checklist of hazards. Sanctions for noncompliance proportional to the risks they pose
Regulatory enforcement <i>Partly risk-based:</i> Prosecutions based on risk-based principles of proportionality and ex ante foreseeability, but judges and juries sometimes swayed by degree of harm ex post.	<i>Strict liability:</i> defendants must prove they exercised all due diligence to avoid violations.

There has, however, been more convergence towards risk as an underlying principle for regulatory inspection and enforcement activity. Both OHS and food safety inspection employ a priority-planning scheme for organizing inspection frequency according to risk, and inspectors in both domains calibrate enforcement sanctions according to the risks posed by violations. Yet, despite the FSA’s (2012a) commitment to risk-based inspection, its own meat inspectors inspect *all* carcasses according to an outdated checklist of hazards, many of which are now rare and of little significance for human health.

In the following subsection we try to explain these uneven patterns in the adoption of risk ideas, by considering a range of explanations for policy change highlighted in the policy transfer and mobilities literatures.

4.1 Path dependency, policy windows, and transfer failure

One conventional explanation for the uneven spread of risk-based regulation would point to local context and historical path dependencies. Historical institutionalists often emphasize the high costs of departing from the status quo to explain limited transfer of policy ideas from one domain to another (Thelen, 1999), while the policy mobilities approach “call[s] attention to the constitutive role of geographical context” in shaping policy outcomes (Peck, 2011, page 780). Others, however, point to the importance of crises for opening ‘policy windows’ for change (Kingdon, 1984). Such approaches might explain the differing extent to which risk-based ideas of regulatory reform have taken hold in OHS and food safety.

In the case of OHS, the mass of prescriptive, sector-specific law that had accumulated since the 19th century created strong path dependencies favouring incrementalism and policy layering. By the late 1960s, however, it was widely recognised that the resulting piecemeal and prescriptive approach undermined the effectiveness of OHS regulation. In that context, Robens was a classic ‘policy entrepreneur’ who drew on his mining background to exploit a ‘policy window’ opened by his review of OHS to suggest sweeping regulatory reforms fitting the political mood of the day. Robens’s idea for consolidating regulatory inspection and policy making in a new national agency built on tripartite foundations reflected his role as chairman of the UK’s then major nationalized industry and fitted with the corporatist ideologies of successive Labour (1964–70; 1974–76) and Conservative (1970–74) governments. Likewise, Robens also drew on mining case law as the legal precedent for a new principles-based approach to regulation based on SFAIRP, which the HSWA 1974 made the basis for regulating all workplaces.

In this highly corporatist and state-centred context, therefore, the rise of risk as a principle of regulatory reform in OHS cannot be attributed to neoliberalization as some suggest (Gray, 2009; Tombs and Whyte, 2010; 2013). Rather, its emergence was linked to a particular institutional context and history, in which Robens was able to turn a ready-made sector-specific solution into a universal principle for all workplace situations.

With BSE, food safety regulation had its own policy window for changing the 19th-century goal of ensuring food is ‘not injurious to health’. In his official inquiry into the crisis, Lord Phillips (Phillips et al, 2000, paragraph 1293) stated that “The Government does not set out to achieve zero risk, but to reduce risk to a level which should be acceptable to the reasonable consumer.” This emphasis on qualifying the goal of safety with risk chimed with central government rhetoric about proportionality and better regulation (Cabinet Office, 2002; HSE, 2013). Asked to review existing regulatory arrangements, the James (1997) Report recommended creating a new food safety agency following the model of the HSE.

Yet the creation of the FSA did not displace the regime’s long-standing legal goal, which James accepted without question. Indeed, his report barely mentions the word ‘risk’. His diagnosis of the BSE crisis focused on organizational failings of the regulatory regime: namely MAFF’s conflicting responsibilities to promote agrifood business and protect consumers; poor coordination amongst regulatory actors; and nationally uneven enforcement practices. Given that diagnosis, James sought only to transfer the organizational structure of the HSE into food safety, rather than its risk-based approach to OHS regulation. Risk ideas, therefore, played little role in the reform of food safety regulation, despite their national and international promotion as prerequisites for good governance and regulatory efficiency (BRC, 2006; Cabinet Office, 2002; HSE, 2013). Consequently, the FSA found itself caught in a contradictory situation; on the one hand it aspired to be ‘risk-based’, but on the other it has

to act within a legal framework that committed it to “ensuring ... food is safe to eat” (FSA, 2011, page 6).

4.2 Organized interest groups

Another influential explanation for policy transfer outcomes is the power of organized interest groups in driving or resisting risk-based reforms. Tombs and Whyte (2013), for example, argue that risk-based regulatory reforms to OHS have served the deregulatory interests of big business. A number of scholars have similarly highlighted the negative influence of major agribusiness interests on food safety regulation (Van Zwanenberg and Millstone, 2005). But such explanations sometimes overlook the importance of interest group configuration and mobilization in shaping the institutional geographies of regulation.

The politics of OHS is principally shaped by the relatively narrow sectoral concerns of labour and business stakeholders, who share an interest in striking trade-offs between profits, job security and safety. Fairman (2007) has argued that the HSE’s risk-based approach to negotiating and rationalizing such trade-offs is facilitated by its corporatist setting in which business and labour representatives can successfully command support from the organized constituencies they represent. This was evident in 2011, for example, when union and business representatives were panel members of the government-commissioned Lofstedt (2011) *Review of Health and Safety Regulation* and agreed to strengthen the regime’s risk-based principles.

Support from organized labour and business has helped sustain the OHS regime in the face of various public and political pressures to reform its basic principles. In the aftermath of disasters, victims’ groups often grab the headlines to demand stricter rules, while the political right regularly draws on often fictitious accounts of disproportionate OHS regulation as symptomatic of an overbearing ‘nanny state’. Yet repeated efforts to deregulate OHS by senior Conservative ministers in the current government have been rebutted by official independent reviews that have found “overwhelming” evidence that business and labour representatives consider the risk-based “regulatory framework established by the ... [HSWA] 1974 remained relevant and was still necessary” (Temple, 2014, page 5).

By contrast, the politics of food safety is more complex than OHS, reflecting the multiple and often conflicting interests of the general public and a plethora of public, professional, and private interest groups across the food supply chain. Unlike OHS, market pressures have largely worked against risk-based food regulation insofar as the market offers consumers greater freedom to shop around for safer food than to workers seeking safer employment. Indeed, public outrage over market failures has been a historic driver of food safety regulation, from the 19th-century adulteration scandals to the 2012 horse meat scandal, when the Environment Minister, previously a great supporter of deregulation, leaned on the FSA to require “that all producers and retailers test all their processed beef products for the presence of horsemeat” regardless of risk (Patterson, 2013).

In addition, the food politics agenda over the last thirty years has been shaped by a complex set of alignments between consumer, producer, processor and retail interests that have tended to favour the legal status quo. For example, the sensitivity of supermarkets to consumer group campaigns has not disposed them to champion explicit cost–benefit trade-offs, or to appeal against court judgments on those grounds. Indeed, stringent regulation has provided rent-seeking opportunities for large food manufacturers and processors who can more readily absorb regulatory costs than their smaller competitors. Consequently, while the BSE crisis prompted substantial reforms to the institutional structures of food safety regulation, it did not open up questions about the regime’s basic legal goals comparable with Robens’s redefinition of the goals of OHS regulation (Howard, 2004).

Moreover, that complex constellation of interest groups has made for a pluralist, rather than corporatist, regulatory setting within which no actors have sufficient legitimacy to make risk-benefit trade-offs on behalf of wider constituencies. For example, when the FSA's own Consumer Committee claimed a mandate to speak for consumers and openly challenged the board's decision making in the mid-2000s, it was promptly abolished and replaced by an Advisory Committee on Consumer Engagement with a more limited remit (Rothstein, 2013). In that context, the FSA has had to work hard to gain support for using risk as a basis for setting regulatory rules. In 2005, for example, the FSA had to conduct an extensive consultation before relaxing a BSE-related ban on cattle over thirty months entering the food chain, which had delivered only a very small safety gain at great cost (Royal Society, 2005). Such risk-based decisions have consequently tended to be the exception rather than the rule.

4.3 Europeanization and global governance mandates

Another factor often driving policy transfers is international governance institutions like the WTO and EU. Europeanization, for example, is often cited as a major driver of risk regulation in member states (Majone, 2003; Orru and Rothstein, 2015), and differences here might explain the uneven transfer and application of risk-based approaches within OHS and food safety regulation. There is substantial EU regulation in both domains, but it has tended either to reinforce established regulatory principles or to be successfully resisted when it challenges them.

In OHS there was no appetite for a European OHS regime at the time SFAIRP was established in UK law in 1974, just a year after the UK joined the EEC. That changed, however, when the 1989 OHS Framework Directive (89/391/EEC) was introduced to meet the 1986 Single European Act's aim of creating a level regulatory playing-field. Among the Directive's broad requirements was one for risk assessment. While risk assessment had not been an explicit employer duty under UK law, its long-established use to meet the demands of SFAIRP meant that the Directive served merely to formalize that practice. A more radical implication of the Directive, however, was successfully resisted. Despite its enthusiasm for *assessing* risk in the workplace, the European Commission tried to overturn SFAIRP as inconsistent with the safety-oriented requirement of Article 5(1) to "ensure the safety and health of workers in every aspect related to the work". After years of wrangling, however, the European Court of Justice found in favour of the UK (C-127/05, *Commission v. UK* [2007] ECR I-4619), and the principle has remained core to UK law (Rothstein et al, 2005).

In food safety, Europeanization has also reinforced preexisting regulatory principles and practices, rather than introducing new ones. The EU has issued a host of requirements for risk assessment and HACCP along with many other rules on the composition, contamination, and handling of food. But this raft of EU Regulations, which is "aimed at guaranteeing that unsafe food is not placed on the market" (178/2002, recital 10), goes with the grain of the UK's long-standing legal principle that food offered for sale should not be 'injurious to health'.

The EU has similarly done very little to alter the principles of regulatory inspection and enforcement in either regime; regulatory competences that are traditionally derogated to member states. Thus, although the European Commission's Strategy on OHS highlights "serious shortcomings in the application of Community legislation", it says little about inspection and enforcement, beyond urging member states to do more "to ensure that those concerned meet their obligations" (CEC, 2007, pages 5, 7). The EU has unusually played a more active role in food safety, but it has tended to reinforce existing practices. Regulation 882/2004 requires risk-based food safety inspection, but this has merely reinforced the long-standing commitment of LA inspectorates to risk-based priority-planning schemes. Likewise, decades-old EU rules (currently Regulation 853/2004) requiring certified veterinarians to supervise the inspection of every animal carcass by a meat hygiene inspector for a long

checklist of hazards, have reinforced the UK's longstanding approach to inspection of that domain. While the FSA supports current EU moves to reform meat inspection, the extent of that reform has yet to be agreed.

4.4 Professional cultures, institutional pressures, and blame avoidance

One final set of explanations for the striking differences between OHS and food safety regulation concerns the cultures and imperatives of regulators themselves. The public-choice literature, for example, suggests that bureaucrats act in ways that advance their organizations' or their own interests by maximizing budgets or by avoiding stressful or unpleasant work (Dunleavy, 1991). Others have pointed to the way in which bureaucrats advance their professional world views through their advocacy of different approaches to policy (Downs, 1967), or are motivated by blame-avoidance imperatives (Hood et al, 2001). Such factors may go some way towards explaining some final puzzles.

In OHS, risk-based approaches to regulation have been favoured by the structure and culture of the regime. Born through consolidation of various sectoral inspectorates, the HSE is dominated by a professionalized cadre of expert inspectors with deep knowledge of the workplaces they inspect. Circulation between the inspectorate and policy staff is encouraged at the HSE, and this mobility has ensured close coordination between regulatory policy-making and enforcement. A common professional background and culture also facilitated the rapid transfer of risk-based approaches from the HSE to LA inspectors. As one senior inspector commented, risk-based approaches are good for "justifying why we are going where are going", both to regulatees demanding a lighter touch and to unions concerned about safety.

Risk-based rationales have also served OHS regulators in other ways, such as deflecting blame for failures to prevent workplace tragedies. After twenty-three Chinese cockle-pickers were drowned in Morecombe Bay in 2004, for example, the HSE revised its guidance and beefed-up enforcement, but an HSE spokesman also observed that with a "huge coastline ... it was impossible to be wholly sure that the tragedy would not reoccur ... You can't eliminate risk, life is full of risk" (*Lancashire Evening Post* 2004). Risk-based rationales have also helped OHS regulators respond to budget cuts and deregulatory pressures from government. While Coalition government ministers trumpeted their proposals for a further one-third reduction in the number of HSE and LA inspections and a complete ban on routine inspections on 'nonmajor hazard' industries as "reducing unnecessary red tape", the HSE chief executive emphasized how "even better targeting of our activities ... will enable us to give the highest level of attention to those areas with the potential to cause the most harm" (DWP, 2011). Tombs and Whyte (2010; 2013) complain, with some justice, that risk-based rationales are being used to legitimate deregulation of OHS, but with many Conservatives determined to dismantle the entire regime, it might also be argued that risk-based regulatory rationales have enabled the HSE to fend off even more draconian cuts.

In food safety regulation, by contrast, structural fragmentation has slowed and promoted the uneven diffusion of risk-based approaches across the regime. While the FSA (2006, paragraph 2.35) aspires "always to be risk-based and proportionate", it has limited scope for doing so, because most food safety regulations are set in Brussels and food law demands safety. Within the FSA, risk-based policy making has also been inhibited by Whitehall's generalist civil-service tradition. When the FSA was formed, it brought together staff from MAFF and the Department of Health, who had generalist policy-making skills but little frontline technical experience of assessing and managing food safety risks. Although the FSA has appointed more staff with food backgrounds, it still relies heavily on external expert committees for advice and has little feel for what one FSA official described to us as the "sharp end" of food safety enforcement. According to LA interviewees, the FSA guidance is

sometimes disregarded as “impractical”, and even the FSA’s (2012b) own Capability Review argued that the agency should develop “greater understanding of the challenges that local authorities currently face” in enforcing FSA policies.

The adoption of risk-based approaches to food safety inspection and enforcement has been less halting but still uneven. Staffed by environmental health experts, LA inspectorates began adopting these approaches in the late 1980s because it suited their need to prioritize scarce inspection resources and reinforced their long-standing emphasis on case-by-case assessment and sanctioning of noncompliance (Hawkins, 2002). By contrast, meat hygiene inspection has been slow to follow suit. This has largely been because vets were able to use their influence in MAFF, the Meat Hygiene Service, and member states to preserve the long-standing requirement that they inspect every animal at slaughter, irrespective of risk.

Institutional fragmentation between policy and enforcement also shaped how risk-based priority-planning systems for food safety inspection diffused through the regime. Rather than being passed down to LAs by ministerial diktat or, as in OHS, as a recommendation from an official review (Robens, 1972, paragraph 218), priority-planning in food safety emerged from the bottom-up, out of the overlapping professional cultures of OHS and food safety inspection. Many LA inspectors have responsibilities for both domains and saw the value of OHS priority-planning systems for managing budgetary constraints and fending off complaints from regulatees. Those LA practices of priority-planning were then transmitted ‘upwards’ to the Department of Health (DoH, 1996), which incorporated them into the first national codes of practice, and for which the FSA is now responsible.

As ideas of risk-based food safety inspection were mobilized to become national policy, their meanings shifted as well. LAs have long framed risk-based systems as resource allocation tools for targeting scarce inspection resources on those businesses judged to need the most oversight. By contrast, risk-based food safety inspection was cited by the Hampton (2005) Review as a lesson in how to *reduce* regulatory burdens on business, prompting a statutory requirement for all regulatory inspectorates to follow suit (BERR, 2007). For the FSA (2012a, pages 6, 13), meanwhile, risk-based approaches promise to “improve business compliance and consumer health protection”, while at the same time advancing the UK government’s business-friendly “priorities around removing regulatory burdens”.

The contrasting patterns of top-down and bottom-up transfer of risk-based inspection in OHS and food safety also reflect the institutional politics of responsibility and blame in the two domains. Unlike OHS, where risk-based approaches help limit the HSE’s liability for enforcement failures, in food safety, the FSA is under less pressure to follow suit because greater fragmentation in the regime leaves it more scope for ‘delegating’ blame for food safety failures (Hood et al, 2001), either onto duty holders or the LAs responsible for ensuring their compliance. Such blame shifting is common across government in similar structural contexts where policies can be made to suit the interests of central government departments without regard for the difficulties of implementation by LAs and other ‘delivery bodies’ (Porter and Demeritt, 2012; Rothstein and Downer, 2012). Indeed, while the HSE tends to be under pressure from ministers to do less, and so is looking for a way of rationalizing lessened controls, the FSA is more likely, in the spotlight of public opinion, to be under pressure from ministers to ‘do more’, such as increased testing in the wake of the horse meat scandal (Patterson, 2013). These pressures tend to undermine the FSA’s ability to enact the risk-based approaches to which it is otherwise so committed.

5 Conclusions

This paper has explored the factors shaping the uneven development, transfer, and application of risk-based approaches to regulating OHS and food safety in the UK. In OHS, risk ideas underpin both the regulatory goal of balancing the benefit and costs of protecting workers

as well as the tools used by the HSE and LAs for regulatory inspection and enforcement. Yet in food, despite the proliferation of risk rhetoric from the FSA, British ministers, and EFSA, UK food safety law remains committed to its 19th-century, and EU-reinforced, goal of ensuring food is safe to eat. Food safety inspection and enforcement, however, have—with the exception of meat hygiene—been more receptive to risk-based practices. LAs adapted OHS risk-based priority-planning systems and those practices then diffused upwards to become national policy for food safety inspection, which then, through Hampton, provided a model for *all* regulatory inspection in the UK.

The complexity and unevenness of these policy transfers challenge arguments that suggest risk-based regulation reflects either a coherent Anglo-Saxon style of regulation (Rothstein et al, 2013) or the globalizing forces of neoliberalization (Gray, 2009). Our analysis of the contrast between the much greater levels of risk-based isomorphism in regulatory inspection relative to regulatory goal-setting highlights the complexity and varied receptiveness of different regulatory functions to risk ideas and instruments. This variety has received little attention hitherto in the regulation literature.

Local context and embedded path dependencies are clearly important in shaping the movement of risk-based approaches across regime functions. But beyond highlighting the influence of contextual factors, or merely concluding that “[m]ore detailed empirical research is needed” to explain the mobility of risk ideas and instruments (Temenos and McCann, 2013, page 351), our fine-grained comparative approach provides a framework for offering some more general reflections on the drivers of such policy transfers.

Contrary to claims about risk as a neoliberalizing logic for eroding regulatory protections, there is little evidence that such pressures have altered regulatory goal-setting in either of our cases. OHS adopted the risk-based regulatory goal of SFAIRP at the impetus of Robens (1972), substantially before the regulatory roll-backs of the Thatcher era. Robens looked to risk as a universal principle for extending the reach of regulation rather than—as neoliberalization theorists often suggest—reducing its protections (Gray, 2009; James et al, 2013; Tombs and Whyte, 2010; 2013). Calls from neoliberal ideologues to deregulate OHS have been repeatedly rebuffed by both industry and labour representatives who support existing corporatist arrangements for striking explicitly risk-based trade-offs in OHS.

Likewise, despite pressures from the WTO, the Europeanization of food safety regulation has reinforced rather than eroded the long-standing legal duty on businesses to ensure that the food they sell is not injurious to health. Changing such legal duties is difficult, given the multiple legislative veto-points at both national and EU levels, and there is little evidence of any explicit pressure for risk-based qualification of those absolute duties amongst those groups that might be expected to benefit. If EU regulation tends to be more precautionary in its goals than the US, our analysis suggests that it may result less from any overarching political shift—as, for example, Vogel (2012) claims—than from sector-specific path dependencies.

Unlike regulatory goal-setting, inspection and enforcement are executive functions for which legislative consent is less important and where, as a result, there may be more sensitivity to top-down and external pressures to adopt risk-based approaches. As part of an increasingly coercive programme of “risk-tolerant de-regulation” (Dodds, 2006), the UK central government has now mandated the use of risk-based inspection across all regulatory domains (BERR, 2007). In many ways, however, our two cases are exceptions to this pattern of coercive policy transfer. Nor do we find much evidence for the emphasis sometimes given to private consultants and other ‘traveling technocrats’ in spreading policy instruments (Larner and Laurie, 2010). Instead, risk-based priority-planning of inspections spread through shared professional networks from the HSE to LA inspectorates who voluntarily adapted them for OHS in the 1980s and later for food safety in the 1990s. Their spread across these domains reflected shared professional concerns with proportionality, resource prioritization,

and blame deflection. As such, not only did the adoption of risk-based inspection and enforcement approaches in OHS and food safety predate statutory requirements for such practices, our two cases provided the model for the later imposition of those requirements by central government.

However, as risk-based approaches to inspection moved ‘up’ the institutional hierarchy, the rationales for them shifted as well. Whereas LA inspectorates were attracted to risk-based approaches as a means of allocating scarce inspection resources, central government seized on risk-based rationales as a means of reducing administrative burdens on business. EFSA (2013) is now tentatively exploring such approaches as a means of improving the effectiveness of food safety controls across Europe. Indeed, it is precisely this mutability in the rationales for risk-based approaches that makes them potentially so mobile (Demeritt and Nobert, 2011).

While business and political leaders have often endorsed risk-based regulation as a part of a wider effort to reduce costs and roll back state regulation, our paper has shown that its adoption depends crucially upon the configuration of interest groups as much as their power and proclivities. The tripartite structure of OHS regulation in the UK has provided a supportive environment for a narrow set of sectoral interest group representatives to negotiate risk–cost trade-offs. This is not possible in food regulation where the number and variety of competing interests make reaching explicit bargains over acceptable levels of risk more difficult.

Likewise, regulatory architecture is also important because it shapes accountability structures and thus the appetite for risk-based approaches among regulators. With responsibility both for setting regulations and enforcing them, the HSE has a strong incentive to adopt risk-based approaches to focus control efforts on the highest priority risks rather than promising to prevent all possible harms. By contrast, in food safety, regulatory goal-setting and enforcement are institutionally distinct, which encourages divergence in the uptake of risk-based approaches. Food law has long aimed for safety without regard for cost and the marginal benefits of additional controls, while regulatory policies devised by the FSA and European Commission have not always considered the practical difficulties of implementing them. When things go wrong, problems are then attributed to failures by others to meet regulatory requirements. By contrast, with the exception of meat hygiene inspection, LA inspectorates have long used risk-based approaches to delimit what they can reasonably be expected to achieve with their scarce enforcement resources and thereby protect themselves from blame in the event of compliance failures.

From this analysis it is possible to distil a set of institutional variables shaping the transfer and application of risk-based regulation, including historic path dependencies and regulatory crises; interest group power and configuration; legal tradition and international mandate; accountability structures; and professional group proclivities. On this basis we might predict, for example, that regulatory architectures with concentrated policy making and implementation responsibilities will face increased accountability pressures and thus see a greater appetite among regulators for risk-based approaches to help them deflect blame for adverse outcomes. Transfers in such contexts are more likely to find a receptive audience actively seeking opportunities for reform. However, the scope for regulators to adopt such approaches will also depend on the interaction of other factors highlighted in this paper, such as their consistency with preexisting legal duties and the potential to secure consensus for any risk trade-offs among key stakeholder groups. Although our two cases did not concern the transfer of risk-based approaches through top-down mandate, there is no reason to expect coercive transfers to be immune from these constraints. While food safety and OHS have become the paradigmatic cases used by Hampton (2005) and BERR (2007) to legitimate the transfer of risk-based approaches to all other regulatory domains in Britain through top-down

mandate, the unevenness of their transfer across these two regimes gives reason to expect similar unevenness in other cases.

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